garden cuttings

a monthly newsletter for the discerning gardener

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Clubs - shows - and schools

Many Garden Clubs and Horticultural Societies are, it seems, having difficulty in keeping up their membership. Few people are willing to take on official posts, interest in shows is flagging and standards falling, once active members are drifting away. There are, of course, several highly successful organizations, but that there should be a general decline in interest at a time when the popularity of gardening as a leisure time pursuit is at an all time high seems to be something of an anomaly.

Presumably many of the younger generation of amateur gardeners don't find that their local club or society fulfills a need, so perhaps these organizations need to re-assess their aims. Both the science of horticulture and the art of gardening are dynamic; skills, fashions and objectives are constantly changing. New technological changes may have passed over the heads of some older gardeners, while the younger ones are keen to keep abreast. Television, magazines and radio talk-back programmes provide up-to-date information and expertise, so perhaps the role of the clubs and societies as 'founts of knowledge' has been somewhat eroded.

Garden competitions are sometimes criticised for encouraging the wrong sort of garden and for perpetuating faults. But if these competitions are judged by people with the depth and breadth of experience to correct these faults surely they must help to encourage a higher standard both of design and cultivation.

At the other end of the scale there is clearly no lack of enthusiasm for gardening in schools, in Queensland at least. Some eighteen months ago, while judging the garden competition in Toowoomba, I was most impressed by what the schools were doing - one in particular. The pupils at this school gladly responded to a request for news of their Project Club activities, and this appears on page 39.

This is our fifth issue, and we have been encouraged by the many letters of support received, and by the number and quality of the contributions from various sources. We still need many more subscribers, so if you find 'Garden Cuttings' interesting and worthwhile, will you let your gardening friends know about it? Or send us the names of any people you think may be interested? Contributions, too, are always welcome, so if you have anything interesting to write about, please do!

TIM NORTH

Plants and drought

Gardeners in dry inland areas will know all about conserving soil moisture, and making the most of what water they have, but those in other areas may find they have problems when suddenly faced with restrictions on the use of mains water.

Adding organic matter to the soil to make it more moisture-retentive, and mulching to prevent excess water loss, are common and well known horticultural practices, but here are a few extra pointers for drought-stricken gardeners.

. . . . Mulching with black plastic film can encourage vigorous growth, through heat build-up under the plastic, that uses soil water faster.

. . . . Expanded urea foam in potting mixes reduces the need for frequent watering of pot plants.

. . . . For drainage when potting use unmilled spagnum moss instead of crocks.

. . . . Plastic pots are the most water retentive, followed by metal, concrete, glazed ceramic, wood, and finally terracotta.

. . . . White containers have lower water requirements than dark coloured ones.

. . . . Use fertilizers low in nitrogen, so as not to encourage excessive leaf growth, and use inorganic fertilizers sparingly to avoid soluble salt build-up in the soil.

. . . . Use insecticides sparingly, also - too much can be absorbed too quickly when the soil is dry.

. . . . Remove all unproductive or unwanted plants promptly, e.g. spent annuals.

. . . . Trickle irrigation uses up to 80% less water than other methods.

Waste water from domestic usage **can** be used on the garden if certain precautions are taken:

. . . . Don't use it on root crops or pot plants.

. . . . Dilute with fresh water if possible and don't use it continuously over one area.

. . . . Don't use laundry water containing bleach, or if you must, let it stand overnight. Laundry products may also contain borax, which can be harmful.

. . . . Remove lint, grease and other impurities from waste water with a filter - a cloth bag over the rose of the watering can will suffice.

. . . . Don't use water containing food residues - use this to flush the toilet.

. . . . Water which has passed through a water softener will contain sodium; applying gypsum to the soil will help to counteract any harmful effects.

(continued page 34)

Plants and drought (continued)

.... Don't use waste water close to the trunks of trees.
.... Watch leaves, flowers and fruit for signs of damage.

In addition to the many drought-resistant native plants we have, the following exotics have been found to be relatively resistant:

Acers, Arbutus, Myrtle, Cistus, Brooms, Choisya, Lavender, Rosemary, Rue, Berberis, Cotoneaster, Ceanothus, Magnolias, Osmanthus, Euphorbias, most grey-foliaged plants, Leyland Cypress *(x Cupressocyparis leylandii).* Camellias have been found to be better than azaleas or rhododendrons.

BOOK REVIEW

'The Royal Botanic Gardens, Melbourne, 1845-1970'

by R.T.M. Pescott

The Royal Botanic Gardens in Melbourne have long been recognized as one of the world's outstanding public gardens. Edward Hyams, in his book 'Great Botanical Gardens of the World' described them as 'being the most beautiful of their kind in the Southern Hemisphere and perhaps in the world . . . in the matter of sheer beauty they are superlative, and it is worth crossing the world to see them'.

That they should be held in such high esteem is due very largely to the entirely opposite, yet complementary, talents of two remarkable men, Baron Ferdinand von Mueller and William Guilfoyle - von Mueller the distinguished botanist who built up a superb collection of Australian plants, and Guilfoyle the practical horticulturist whose genius created a supreme example of English landscape gardening, after the style of Repton, which has been jealously guarded by each succeeding Director. That this was achieved in the face of an often less than appreciative public and government makes it all the more remarkable.

The story of von Mueller's fall from favour, his eventual dismissal and replacement by Guilfoyle, is now well known, but the author of this book is eminently fair, and puts this in its proper perspective.

One get the impression that this book has been a labour of love. Mr. Pescott was himself Director of the gardens for thirteen years, until he retired in 1970. He obviously knows every inch of them intimately, and has painstakingly researched every episode in their history. There is a wealth of historical detail in this book, therefore, which has been marshalled with great precision and with a meticulous eye. If any criticism can be levelled it is that Mr. Pescott's prose is sometimes a trifle cumbersome, and his syntax occasionally at fault. But these are minor criticisms, for it is a very readable book, in fact an absorbing one, and a worthy history of these great gardens. It is well illustrated throughout, both in colour and black and white, with photographs, sketches, and plans of the gardens at various stages in their development.

'The Royal Botanic Gardens, Melbourne, 1845-1970' is published by Oxford University Press, 7 Bowen Crescent, Melbourne, and the recommended retail price in Australia is $29.95.

Rubbish amongst our natives

contributed by Don Burke, Roseville, N.S.W.

Dr. Henry Cathey & Dr. Phil Parvin, two leading horticulturists from the United States, visited Australia in 1980 and volunteered that our country has more potential in its native plants than any other country on earth. There is no question that our flora is destined to take an important place in world horticulture. However, just as wild roses or azaleas are inferior to domesticated varieties, so too our plants will have to be developed for garden use.

Countries such as Israel, the United States, Spain and others are already developing our flora, yet the amount of development Australia is doing is very, very small. Hawaii developed our Macadamia nut - the only commercial food ever to originate in Australia.

Not only are we backward in developing our own plants, but also we are rather confused as well. Amongst the thousands of species of wild plants, only a small number have potential as garden plants. Many superb wildflowers are inferior garden subjects. Plant collectors have brought vast numbers of species into cultivation, yet few have potential for domestication. So far, unfortunately, little 'sorting out' has been done and the general public have often been supplied with inferior species or forms that are poor performers.

During the last few years some interest in developing our natives has arisen and, with it, some selection of better types. For years inferior plants such as *Grevillea biternata, Hakea saligna* (correct species name now *salicifolia)* and many obscure, touchy plants have been common while better, tougher species or varieties have been neglected. In all fairness, the thousands of wild plants pose an enormous problem to sort out. Clearly, though, we must face the job and start developing our plants before other countries do it for us.

Contents

Clubs - shows - and schools .... Page 33
Plants and drought .... Page 33
Book review .... Page 34
Rubbish amongst our natives .... Page 34
The Flannel Flower .... Page 35
More unusual plants .... Page 36
- and some unusual vegetables .... Page 36
Plants wanted and for exchange .... Page 36
Sculpture in the garden .... Page 37
New technology lawn mowers .... Page 38
A garden buggy .... Page 38
A new liner for hanging baskets .... Page 38
Spray packs for pest control .... Page 38
The Dutch Floriade .... Page 38
Gardening projects in schools .... Page 39
A new use for 2. 4-D .... Page 39
A native plant arboretum in the U.S.A. ..... Page 39
Golden boston fern .... Page 40
News briefs .... Page 40
Catalogues received .... Page 40
Where did they go? .... Page 40
Black spot on roses .... Page 40
Quote of the month .... Page 40

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The Flannel Flower

(Actinotus helianthii)

contributed by Paul Jones

Perhaps the most endearing and best loved of our local (N.S.W.) natives, this well-known flower never fails to excite a special joy when encountered in soft starry drifts along coastal bushland roads. That such gentle elegance can aspire from such arid, gritty soil during the long, hot, rainless summer months is no less remarkable than the fact that this plant in no way relates, botanically, to the daisy family (Compositae) as one might assume other than in general appearance.

It belongs in fact to the Umbelliferae, whose species have their flowers in umbels. that is, the flowers radiate from one point like the spokes of an umbrella.

The soft woolly boss of the Flannel Flower is actually a cluster of tiny separate flowers or florets and without petals. The Flannel Flower has no true petals; the so called petals are in fact bracts - a sort of half leaf petal which is more obviously stated in the Poinsettia; the flaming red splash of this very familiar suburban plant consists entirely of bracts, the actual flowers being the rather overlooked central cluster.

The Flannel Flower, belonging to the Umbelliferae, is therefore closely related to the carrot, parsely, celery and other such prosaic plants all of which are members of this family. Surprising? Certainly, but it must not be dismissed as a mere species of this massive group. As far as is known it could well be unique in the whole phylum of botany as it is indeed, the only flower whose 'petals' bear the extraordinary likeness to the man-made flannel fabric.

The tiny European alpine Edelweiss - so steeped in sentiment and tradition - is a true member of the daisy family and a close runner up, but bears no comparison to the generous use of flannel in our flowers!

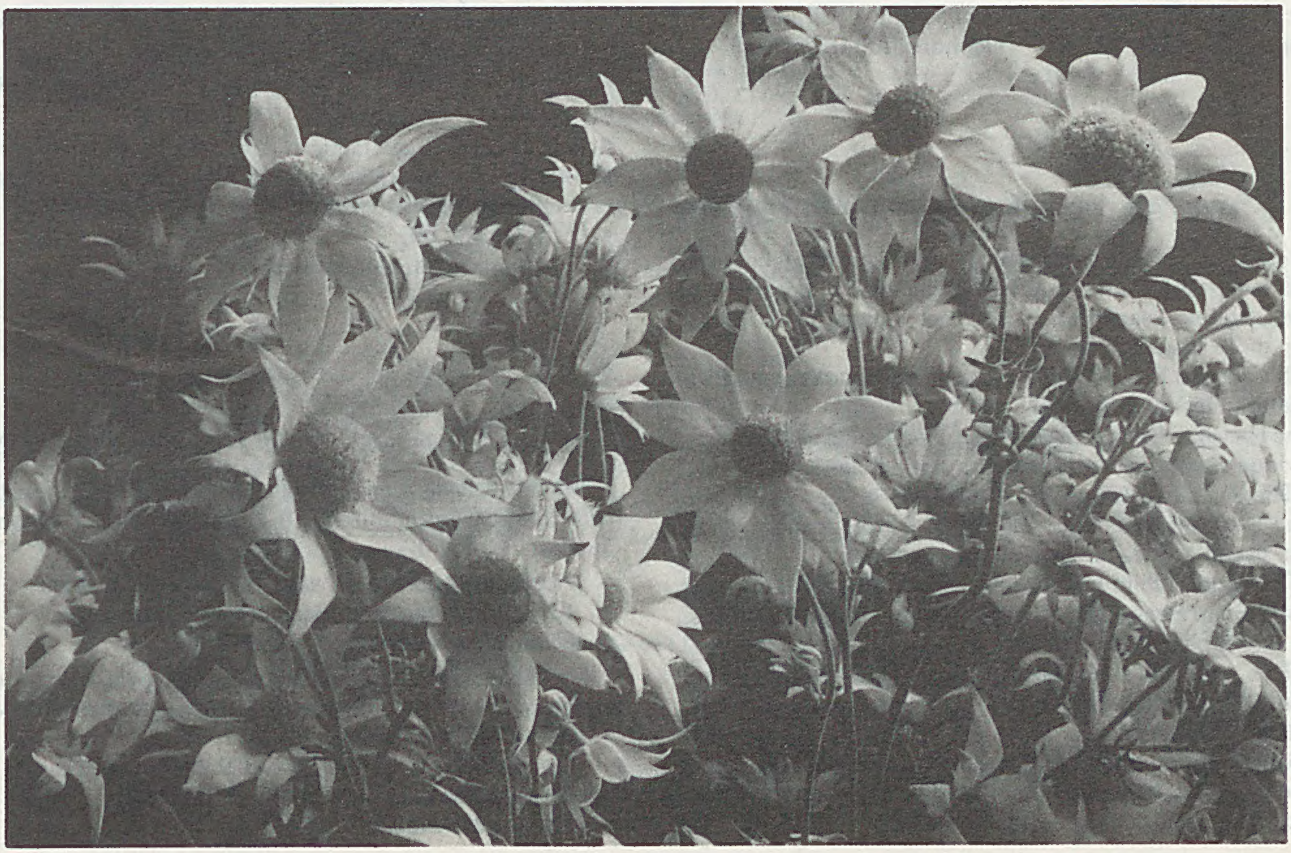
Strange it is that this resemblance is to be found in nature but no less so than the finest and most convincing satin inside a tulip, the crushed silk of a peony, the lacquered petals of the buttercup, the rich velvet plush of celosia and the anthurium which is more like plastic than plastic is itself!

Named by the French botanist and traveller, de La Billardiere, who visited the eastern states towards the end of the eighteenth century, the Flannel Flower is confined to N.S.W. and southern Queensland and fortunately, is abundant around the Sydney area.

The generic name, *Actinotus,* is from the Greek actinotos, meaning radiated and in reference to the rayed appearance of the involucre. The specific name, *helianthii,* is the botanical name for the sunflower. The name therefore alludes to the general look of the Flannel Flower to the sunflower, but in form only.

Tricky to cultivate, but possible, the Flannel Flower responds to no fuss and dislikes overcare. It prefers to be let alone to battle the elements in its own spartan way, but can, however, be raised successfully from seed providing the aspect is right and the soil mix exactly to their liking. Leaf mould mixed with rough gritty sand I have found ideal and have raised - and with much pride - clumps of this wonderful flower in pots on my Bellevue Hill rooftop garden. An additional reward comes from exclaiming friends when they come to visit and on these occasions I place the pots of Flannel Flowers in very prominent positions inside the flat. They can hardly believe it!

Paul Jones



Photograph by Paul Jones

More unusual plants

Mr. Wheller, who contributed the feature on unusual passion-flowers in last month's issue, has sent us a list of some of the plants he is growing in his garden at Romsey. Included in his list are:-

Arthrotaxis cypressoides -the Tasmanian Pencil Pine
Crinodendron hookerianum - the Red Latern Tree from Chile
Desfontainea spinosa - another medium sided shrub from Chile
Pittosporum phillyraeoides - the Willow or Weeping Pittosporum
Agonis flexuosa 'variegata' and *A. flexuosa* 'Belbra Gold
Schotia brachypetala - the Hottentot Bean from South Africa
Hemiandra pungens - a Western Australian ground-cover
Platylobium formosum - fhe Flat Bean
Prostanthera ovalifolia - variegated form
Prostanthera baxteri var. sericea; P. calycina and *P. cuneata*
Acacia rotundifolia and *A. lasiocalyx*
Kunzea pomifera - a ground-cover plant native to Victoria and South Australia
Cornus florida 'rubra' grafted onto *C. capitata.*
Leucospermum catherinae and *L. cordifolium*

Mr. Wheller also has a number of species and/or hybrids of Protea, Grevillea, Hakea, Melaleuca, Callistemon, Phebalium, Boronia, Dampiera, Kennedia, Callitrix, Beaufortia, Epacris, Eucalyptus, Brachysema, Pultenaea, Darwinia and Anigozanthus.

He says that cuttings, seeds and some small plants are available at suitable times, and suggests that those interested may like to call if in the area, or else ring in advance if making a special trip. He points out that the growing and flowering seasons in his area are about four to six weeks later than Melbourne, and that March to May is the best time for collecting plants. The address is:

Mr. C.L. Wheller, cnr. Metcalfe Road and Todd Lane,
Romsey, Victoria, 3434. Telephone: (054) 29 5513

. . . and some unusual vegetables

Forest Edge Nursery, at Yungaburra in Northern Queensland, specialize in tropical and sub-tropical vegetables, many of which, however, should readily adapt to most regions of Australia. Among those they list are:-

. . . . The Winged Bean *(Psophocarpus tetragonolobus)*, which was featured in Vol 1, no. 1.

. . . . The Hyacinth Bean *(Lablab niger)*, a perennial vine of which pods, dried seeds, leaves and flowers are edible.

. . . . The Jackbean *(Canatalia ensiformis)*, a shrubby annual growing to about one metre tall, which is frost tolerant when mature, useful as a cover crop or green manure.

. . . . The Dutch White Half Runner *(Phaseolus vulgaris)*, also known as Snap Bean - can be grown for green or dried beans, and is very prolific.

. . . . The Yam Bean, or Mexican Water Chestnut, a twining climber with edible tubers; the roots contain rotenone, the main ingredient of Derris Dust.

. . . . Sweet Lupin *(Lupinus albus var.ultra)*, which is free of the bitterness of the Common Lupin; seeds can be eaten raw or cooked when dried.

. . . . The Yard Long Bean *(Vigna unguiculata)*, a long-podded relative of the Snake Bean; pods can reach a length of 60cm and are cooked like green beans.

. . . . The Tepary Bean *(Phaseolus acutifolius)*, a half-runner which can be allowed to sprawl without support; matures in 60 to 90 days and is very drought-resistant; grown for the dried white seeds.

. . . . The Sword Bean *(Canavalia gladiata)*, a climber from S.E. Asia; immature pods can be eaten like green beans; the dried seeds are claret-red in colour and by far the largest of any edible bean seed.

. . . . The Pigeon Pea *(Cajanus cajan)*, used in India to make Dhal.

. . . . The Wax Gourd *(Benincasa hispida)*, a rapid-growing climber or scrambler, that can be eaten raw like a cucumber, or lightly steamed.

. . . . The Bathroom Sponge *(Luffa cylindrica)*, a rapid-growing annual producing 20 to 70cm long fruits with a continuous fibrous network.

. . . . The Snake Gourd *(Trichosanthes cucumerina var anguina)*, an annual climber with fruits that can reach 2 metres in length; these can be peeled, sliced and boiled.

. . . . The Broom Sorghum *(Sorghum bicolor var dochna)*, the dried flower heads can be made into a broom.

. . . . The Giant Russian Cucumber *(Cucumis sativa)*, fruits can reach 4kg in weight, and are orange-brown in colour; can be eaten at any stage of their development.

. . . . The Mammoth Sunflower *(Helianthus annuus)*, reaches 3 metres in height with many seed heads 30 to 40cm in diameter.

. . . . The Oilseed Sunflower; produces black seeds which contain up to 50% oil.

. . . . The Oriental Melon *(Cucumis melo)*, a small oval variety from China and Japan; produces 10 to 15cm long yellow fruits which are very sweet.

. . . . The Potato Yam *(Dioscorea bulbifera)*, a climbing perennial which produces bulbils at the leaf axils; these may reach 1kg in weight and can be cooked like potatoes; the hardiest of all the true yams.

A full descriptive catalogue is available from the nursery for $1.00 (which is refunded with the first order). The address is:-

Forest Edge Nursery,
P.O. Box 60,
Yungaburra, Queensland, 4872.

Plants wanted and for exchange

Anyone having seeds or bulbs of the following is invited to write to Mr. Gordon Julian, 18 Fromalls Street, Toowoomba, Queensland, 4350:-

Romulea sabulosa, R. alba, R. citrina. R. crocea
Chlidanthus fragrans (Sea Daffodil) - bulbs only
Tulip species - bulbs only

Mr. Julian has seeds of the following available; anyone who is interested should write to him direct at the address above:

Anacyclus depressus
Sisyrinchium californicum and *S. brachycarpus*
Romulea speciosa rosea and *R. hartungii*
Nasturtium 'Indian Chief'

Sculpture in the garden

From Pliny the Younger, to William Kent, to Roberto Burle Marx, the arts of sculpture and garden design have pursued an intimate and happy relationship. The one static and permanent, the other constantly changing with the hours and the seasons, sculpture and garden draw qualities one from the other.

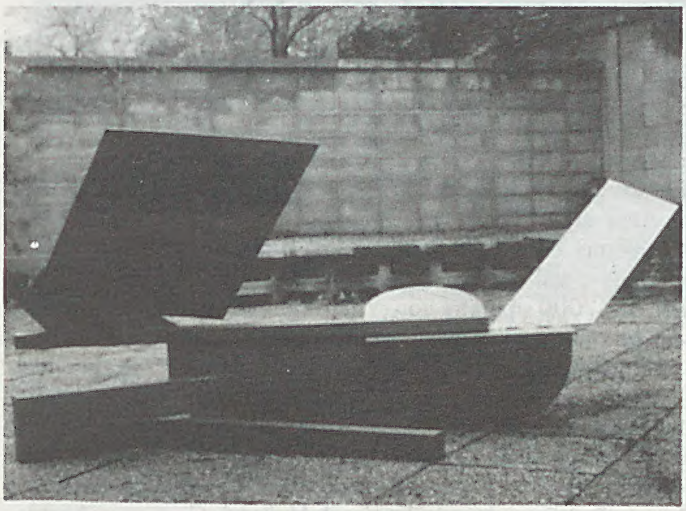
To the garden, sculpture has what Peter Coats, in his excellent 'House and Garden Book of Garden Decoration', calls 'a built-in talent for surprising, halting, holding or redirecting the eye'. Sculpture can either strike a dramatic note, or it can quietly absorb its immediate surroundings, becoming as it were a 'genius loci'. In its turn the garden, with its trees and shrubs and perhaps green turf, provides the background which sculpture - and much modern sculpture in particular - seems to call for. Carefully sited sculpture and garden complement one another, the shapes, colours and textures of the changing landscape being the perfect foil for the immutability of stone or metal.

Herein, of course, lies a challenge, that of selecting the right piece, and placing it in exactly the right spot. But the respective attributes of sculpture and garden are such that this is a marriage that can be consummated in a garden of any size, any shape, of any type, anywhere.

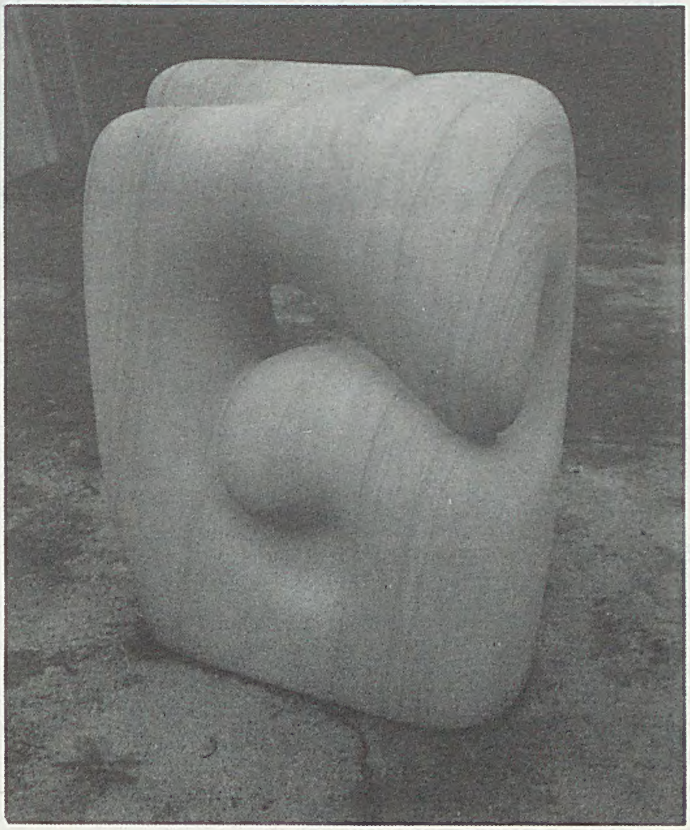
An ideal opportunity of investigating these possibilities now exists with the opening this month of a new sculpture gallery in the Sydney suburb of Glebe. Situated in and around a large and beautiful house, now fully restored, the Irving Sculpture Gallery, in addition to a large indoors display, has a spacious outdoor area where sculptures suitable for gardens are exhibited in an ideal setting. Initially the gallery is showing works by Australian sculptors, but later will consider exhibitions by overseas artists. On this page are photographs of two of the works currently being exhibited.

The Irving Sculpture Gallery is at 144a St. John's Road, Glebe, N.S.W. 2037, and is open from 11.00 am to 6.00 pm from Wednesday to Sunday, or by appointment (telephone (02) 692-0773 or (02) 692-0880).

(1) WINDERMERE - steel, painted - TED CASTLE
Windermere is an example of a work of monumental scale which requires the freedom and situation of outdoor surroundings to assert its independance. A work which demands its own space, with insistance, Windermere though firmly grounded is so structured to give the illusion of floating elements. This is achieved through judicious placement of cantilevered beams. In its interaction with garden surroundings, Windermere encourages a fresh contemplation of these surroundings and a new consideration of their changing elements.



(2) DREAMTIME - Gosford Sandstone - JAN SHAW
Dreamtime is an example of a sculpture which takes on a surprisingly natural function in garden surroundings and integrates into their form and colour. An organic form, apparently energised by natural forces, it enhances the quality of its setting, and is redifined by changes of light and of season. The distance and perspective of the natural environment in no way reduces the intimacy between the work and the viewer, and indeed it encourages a fresh consideration of relationship between art and landscape.



GARDEN GEAR

New technology lawn mowers

Unusually wet weather in spring and early summer, such as we experienced in 1981, means lush growth on the lawns and, one might expect, harder work in keeping them mown.

However, according to the Mower Specialists Association of Australia, a 410 strong group of mower retailers, new design technology and service is coming to the aid of gardeners; this includes electronic ignition and light-weight construction which has dramatically raised the convenience and ease of mowing. Other features of the new mowers include ball roller bearings for easier and smoother use in heavy duty work, tailor built high-arch base design with larger catchers for grass collection, and special fold-down handles for convenient transport and storage.

Typical of this 'new breed' of mowers are the Victa 'Craftsman', at $259, and the 'Silver Streak' at $289. Both these models feature electric ignition, and both are handled exclusively by MSAA members, who offer a special 12-point service charter, and unique warranties of up to two years.

A garden buggy

Victa have produced a handy all-purpose trolley for use around the garden. Originally designed for the collection of grass clippings, with a special re-usable heavy duty plastic bag fitted over it, it can also serve as a trolley for transporting heavy items, such as shrubs in pots, bags of soil or compost, or even a full garbage bin. When mowing the lawn it can be wheeled up to the mower for the simple and easy emptying of the catcher.

The Victa Garden Buggy retails for around $25.00.

THE VICTA GARDEN BUGGY

A new liner for hanging baskets

Art Bark, just released by Yates, is a synthetic fibre product specially made for lining baskets. Although it looks like natural bark it lasts up to ten times longer, doesn't tear easily and adapts to any basket shape. It's capillary action ensures that water is evenly distributed around the basket. When wet the colour darkens, and thus it indicates when water is needed - if the bark is light in colour it's time to water. Furthermore the material actually 'breathes' so it will not retain excess moisture.

Art Bark is available form nurseries and garden shops in packs of two sheets each, and in various sizes.

Spray packs for pest control

Three pest control products introduced by Hortico have the advantages of being ready-mixed and easy to apply without the disadvantages inherent in an aerosol, that is waste and the possibility of damage by the propellant gas. These products are in pump-action packs and, being water-based, are quite safe. They have adjustable nozzles for concentrated or general spraying. The three products are:-

a knock-down natural garden insecticide based on pyrethrin
a selective lawn weeder
an ant spray, based on permethrin, which has a residual effect lasting about three months.

The Dutch Floriade

In 1972 more than four million people visited Floriade/72, a gigantic international horticultural exhibition, in Amsterdam.

This year Floriade/82 will be staged over a period of 186 days, from 8th April to 10th October, thus spanning three flowering seasons - spring, summer and autumn. It will cover a 54 hectare site in the south-eastern quarter of Amsterdam, along the banks of the Gaasplas, a 60 hectare lake. Part of the exhibition will be under glass in greenhouses; in addition there will be a 7000 sq.metre flower hall and a series of thirteen indoor exhibitions.

Floriade/82 offers a wonderful opportunity to study Dutch horticultural expertise and to compare foreign exhibits in the international competitions.

Stewart Moffat Travel, 31 Queen Street, Melbourne, have organized a tour for garden lovers centred on the Floriade. This tour will visit gardens in England, Holland, Germany, Austria, Italy, Switzerland and France, and includes a four day stop-over in Greece on the way home. Beside the Floriade visits will be made to the Keukenhof in Holland and the Chelsea Flower Show in London.

The tour will be accompanied by John Baxter, well-known as a horticultural lecturer, judge and writer, and President of the Box Hill Horticultural Society. It lasts forty-two days, leaving Australia on 14th May. The price is $3360 ex Melbourne. Further information can be obtained by writing to Stewart Moffat Travel or ringing (03) 62 6771.

Gardening projects in schools

If anyone believes that the younger generation is not interested in gardens and doesn't care about the environment they should visit Queensland to see what is being done in schools in that State.

The inspiration stems, no doubt, from the Agricultural Project Club Branch of the Queensland Department of Education, which publishes a newsletter entitled KEEN (Kids Environmental Education Newsletter). But the seeds have clearly fallen on fertile ground, and Garden Project Clubs are hard at work in many schools. For example at Beerwah, pupils have planted paw-paws, a coffee tree, macadamias, bananas and avocados; at Goombungie some two hundred shrubs have been planted in school grounds and flower gardens have been created as well; at Miriamvale fifty-one trees have been established, including jacarandas, poincianas and eugenias. To make sure that the trees which have been planted are properly cared for the Department has introduced an 'Adopt a Tree' scheme, under which each Project Club member is invited to 'adopt' a tree for a year, and to attend to all its needs; he or she receives a special certificate to this effect.

Top marks for gardening, however, go to Harristown State School in Toowoomba. The following quote from the Project Clubs President's report for 1981 sums up the remarkable achievements of the teachers and pupils at this school - "... we have actively participated in the improvement of the school environment, and by the knowledge we have gained we hope we can use these experiences in our own homes and build on them for the future". And with that sort of attitude the future suddenly starts to look a lot brighter.

The most ambitious project at this school so far has been the waterfall - the construction of which would do credit to any professional landscape gardener. In 1981 the children decided to add a bird-bath — or rather a trio of bird-baths — to complement this area; they couldn't find what they wanted from any local supplier, so they had the three bird-baths specially made to their own specifications — this is typical of the thoroughness that has gone into every gardening project at this school. They say that even after three months the bird population has increased.

Other projects at Harristown have been a native plant area, with 150 native trees and shrubs from which they hope to propagate in future years, a vegetable garden which incorporates a hydroponic unit, a water reticulation system and a composter, a rose garden and a cacti and succulent garden.

The Project Clubs are responsible for raising their own funds. Some of the ways in which they have done this have been by organizing raffles, making and selling macrame belts, pot hangers, etc. by selling peanut brittle, with lolly stalls and second-hand clothing stalls. Meetings are conducted in class and about two hours each week are spent on project club work.

If any school can claim to be more garden-conscious than Harristown, or can beat their achievements, we would like to hear from them.

THE WATERFALL AND TRIO OF BIRD BATHS AT HARRISTOWN STATE SCHOOL

A new use for 2, 4-D

The herbicide 2, 4-D, or to give it it's full name, 2, 4-Dichlorophenoxyacetic acid, is proving to be a useful tool in the bio-enginnering of plants.

The Plant Genetic Manipulation Group at England's University of Nottingham, under a grant from the African Violet Society of America, has found that as little as one part per ten billion of 2,4-D causes African Violet cells to multiply and produce cells with very thin walls. These can be broken up into wall-less subcellular fragments called microplasts. Higher levels of 2,4-D produce wall-less cells known as protoplasts. The lack of cell walls makes microplasts and protoplasts useful for cell fusion work, opening up the possibility of hybridizing African Violets with other gesneriads, such as gloxinias or episcias, or transferring flower colours or foliage variegations between genera.

A native plant arboretum in the U.S.

An outstanding native plant arboretum is the 355 acre Hayes Regional Arboretum in Richmond, Indiana.

This arboretum restricts its collection to the 181 species of woody plants that grew in the drainage basin of the Whitewater River in Indiana and Ohio before the pioneers introduced any new plants. It stresses that these are fine plants, long-lived and easily maintained, because they have had thousands of years to aclimatize to the region.

Each year the arboretum distributes a thousand trees to the first thousand visitors during an April week-end. A computer, into which are fed information on soil conditions, light, etc. recommends specific trees for each individual situation. As a result of these programmes, local nurseries report that sales of native plants have increased by over 20%.

Golden boston fern

'Fandancer' is the name given to a new variety of Boston Fern *(Nephrolepsis exaltata bostoniensis)* with dazzling golden fronds. A United States patented variety, it is now being propagated in Australia by special arrangement.

As might be expected with a plant with this colour of foliage, it requires reasonably good light conditions; however it has the advantage of not requiring large amounts of water, in fact it prefers to be kept slightly on the dry side.

'Fandancer' was introduced into Australia by Scotsburn Nurseries, of South Oakleigh, Victoria who, in conjunction with Westlands Tissue Culture Laboratories of Tasmania, hold the copyright. Scotsburn Nurseries now have grower nurseries in most States participating in its initial release, with up to 50,000 well advanced plants being available.

News briefs

The Science and Education Administration of the United States Department of Agriculture reports that microwave blanched vegetables have less flavour, lower nutritional content, poorer colour and texture than vegetables blanched with hot water or steam.

Good news for vegetarians? A laboratory in California is attempting to put animal genes into plants to produce meat-like proteins.

Where did they go?

What happened to white nasturtiums? We are told that they were shown at the Paris Exhibition in 1878, and 'Familiar Garden Flowers' by Shirley Hibberd and Edward Hulme, published around 1908, praises white and even purple nasturtiums.

And what has happened to scented freesias? Early in 1981 a trial of freesias was held at the Royal Horticultural Society's gardens at Wisley, in England. The report on this trial states that the vast majority of the flowers had no scent at all, and with those that did the overriding odour was that of pepper!

Black spot on roses

Considerable success in dealing with this troublesome disease has been reported by using a half tablespoon of Maneb and a half tablespoon of Benomyl (Benlate) in 5 litres of water. This spray apparently leaves little residue on the leaves, is safe at high temperatures and has a long-lasting effect. Spraying every two weeks through the growing season is recommended, ideally beginning before the new growth starts, since the fungus spores overwinter in lesions on the stems. This same spray is also said to give improved control of powdery mildew.

Catalogues received

Johima Books, Village Arcade, 5 Hillcrest Road, Pennant Hills, N.S.W. 2120 (P.O. Box 41); telephone (02) 84 6576. A comprehensive list of horticultural and agricultural books, including many U.K. and U.S. titles. They will also try to obtain any 'hard to get' book if information on title, author and publisher (and if possible date of publication) can be given.

Quote of the month

The essence of garden design is the alternation of the element of expectation with the element of surprise.

Harold Nicholson

garden cuttings

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Up to September 1982, we are offering a year's subscription *free* to anyone who likes to enrol ten or more other subscribers. Just send the names and addresses of the ten or more people, with their subscriptions (or one remittance to cover all subscriptions) together with your own name and address, and you will receive **Garden Cuttings** *free* for one year.

In addition commissions are available, up to September 1982, to retail nurseries, garden centres, horticultural and specialist plant societies, garden clubs and other organizations, who distribute application forms to their customers or members, provided that these forms are clearly marked with an identifying stamp.

Commission will be at the rate of 5% of the total subscriptions received, over and above *ten*. That is, a total of sixty subscriptions, for example, from any one source will earn a commission of $25.00.

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